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AGO ltr 29 Apr 1980

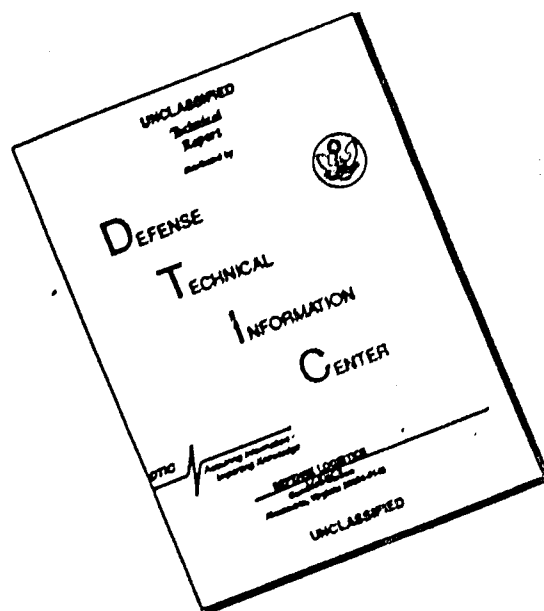
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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO

AD851119

AGAM-P (M) (15 Apr 69) FOR OT UT 691208


17 April 1969

SUBJECT: Operational Report - Lessons Learned, Headquarters, 93d Engineer Battalion (Const), Period Ending 31 January 1969

SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation in accordance with paragraph 5b, AR 525-15. Evaluations and corrective actions should be reported to ACSFOR OT UT, Operational Reports Branch, within 90 days of receipt of covering letter.
2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:


C. A. STANFIEL
Colonel, AGC
Acting The Adjutant General

1 Incl
as

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DEPARTMENT OF THE ARMY
Headquarters, 93d Engineer Battalion (Const.)
APO San Francisco 96370

EGFB-OP

13 February 1969

SUBJECT: Operational Report of 93d Engineer Battalion (Const.) for
Period Ending 31 January 1969, RCS CS FOR - 65 (RI)

CINCUSAPAC, ATTN: GPOP-DT, APO San Francisco 96558
Commanding General, USARV, ATTN: AVHCC-DST, APO San Francisco 96375
Commanding Officer, 20th Engr Bde, ATTN: AVBI-OS, APO San Francisco 96191
Commanding Officer, 34th Engr Gp, ATTN: EGFB-OP, APO San Francisco 96370

1. Section 1. Operations: Significant Activities:

The Battalion remained assigned to the 34th Engineer Group (Construction), 20th Engineer Brigade through the report period. The Battalion Headquarters and most of the battalion remained at Dong Tam Base, RVN (XS4744) throughout the report period. Battalion organization is shown in inclosure 1. B Company headquarters, earthmoving platoon, and one construction platoon moved from Dong Tam to Moc Hoa, RVN (XS0391) by air on 12 and 13 November with equipment and supplies arriving by armed convoy of LCM and LCV's on 13 November. The second construction platoon joined the Company from Dong Tam, moving to Moc Hoa by air on 18 December after being attached to C Company from 23 October to 18 December. The 67th Engineer Company (Dump Truck) was attached from the battalion on 4 December and attached to the 94th Engineer Detachment (Quarry), located at Vung Tau, RVN (YS3047). One dump truck platoon of the 67th had been in Vung Tau since July 1968 in support of the 36th Engineer Battalion (Construction) in its Vung Tau Quarry operations. Relocation of the 36th Engineer Battalion from Vung Tau to Vinh Long, and detachment of the 94th Quarry Detachment from it favored moving the 67th's company headquarters and maintenance support to Vung Tau. A platoon (-) was left at Dong Tam in support of the 93d and was principally used during the reporting period for the rock off-loading operation. The first platoon of the 67th was attached to the 93d on 15 December and further attached to A Company to provide the degree of control and support appropriate to a small detachment. The platoon was manned at about half strength and maintained approximately 10 dump trucks at Dong Tam.

The 702nd Engineer Detachment (Power Line) remained attached to C Company throughout the period. It continued construction of the Dong Tam Base 4160 volt primary, and a 220 volt secondary power systems. The company and battalion continued to use the 13 man detachment (1 officer and 12 EM) as the highly skilled nuclei for teams totaling over 40 men.

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691208

Inclosure

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The 113th Engineer Detachment (Concrete Mixing and Paving) remained attached to A Company through the period, however it was reduced to zero strength 1 January in conjunction with reductions in engineer spaces throughout 34th Engineer Group. The 4 cubic yard automated batch plant continued in operation with detachment personnel transferred to A Company and continuing to perform the same jobs. The plant produced 6,222 cubic yards of concrete during the period, with production decreased in January due to shortage of cement.

The Battalion retained operational control over B Company, 36th Engineer Battalion (Construction) into November as B Company completed its projects at Dong Tam. B Company of the 36th had been specially tailored in August 1968 for three major vertical construction projects at Dong Tam, by the addition of a construction platoon of D Company, 36th and relocation of B Company's earth-moving platoon. The first two of the three major projects, totaling twelve pre-engineered, 3,840 square feet of storage and maintenance buildings were turned over to the 9th Division on 4 November 1968. The D Company platoon was then detached and returned to Vung Tau. Both of B Company's construction platoons were then used to complete the 11,480 square foot maintenance hangars. Turnover of these hangars to the 9th Division on 27 November 1968 terminated the 93d's operational control of B Company of the 36th.

The 93d continued to be heavily engaged in base construction during the period all which was at Dong Tam. Operational support however, consumed a growing portion of the battalion's effort, with construction of the tactical base and airfield upgrading at Moc Hoa and construction of a 100 x 4000' helicopter staging area, CH-47 staging area, and revetments for CH-47, OH6, UH1, and cohe gunships at Dong Tam. In base construction major projects essentially completed during the period were the power plant, water plant, water distribution system, hangars and helicopter rearming facilities. Other projects completed were 3,840 square feet of dispensaries and clinics; 68,480 square feet of maintenance buildings; 4,640 square feet of community facilities; 3,840 square feet pre-engineered buildings; a postoffice and 93d Engineer Battalion warehouses for maintenance parts and supplies; the projects of B Company of 36th Engineers; and sand cement aircraft maintenance and supply storage hardstands. A list of projects completed is given in inclosure 2.

Self-help by the 9th Infantry Division continued at a high rate at the beginning of the period but had almost stopped by mid-December as the authorized scope of the self-help construction billets and mess halls was converted into completed buildings. The battalion continued to support this construction effort with delivery of concrete, construction of mess hall floors, surveying, building pad preparation, issuance of material, technical assistance, and inspection.

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Major elements of the basic Dong Tam MCA construction directive were removed and placed on contract to provide a greater simultaneous effort on base development. These were: unit maintenance shops, grease racks, chanel-theaters, PX facilities (other than a PX concession building under construction by C Company, 93d at the close of the period). The resulting scope under this key directive is shown in inclosure 3.

The Battalion gained flexibility in the assignment of projects at Dong Tam during the period with completion of the major projects to which the 9th Division had been given first priority. The large and expanding commitment at Moc Hoa reduced some of this additional flexibility with the relocation to there of one third of the vertical effort and over half of the battalion's earthmoving capability. The projects at Dong Tam were scheduled from the 9th Division priority list to use all capabilities and to provide platoons which had been engaged in single efforts lasting three or four months with some variety and rapid job completions. The C Company earthmoving platoon which had been pouring mess hall floors and supporting self-help building pad preparation went to sand-cement hardstands and then to major earthwork involved in the Ch-47 revetment and storage areas. D Company's earthmoving platoon continued to lay the water distribution system and also worked on sand-cement hardstands and constructed the 100 by 4000' sand-cement helicopter staging area. C Company's construction platoons, which had spent three or four months on the power plant, were put on helicopter revetments, tropical wood shell building construction, and the construction of preengineered buildings. The D Company platoon which built the hangars also went to tropical wood shell buildings, as did the platoon which worked on the water plant. The batch plant continued to produce concrete for the Battalion. The 15th and 86th Engineer Battalions (Combat) and self-help units on Dong Tam.

A Company continued to off-load crushed rock from barges in Dong Tam harbor and supported both 93d and 86th Engineer Battalion projects with asphalt distributing and other specialized equipment. 43,697 tons were off-loaded during the period. A Company provided asphalt distribution and a resident direct support contract team for B Company at Moc Hoa. Projects in progress at the close of the period are listed at inclosure 4.

The character of logistics problems changed with the decrease in self-help construction and the relocation of B Company to Moc Hoa during the period. Where keeping bulk quantities of basic items, such as sized lumber, corrugated sheet, cement, power poles, and cable, had been the major concern of the S-4 during the large Dong Tam build-up phase; the supply of specific items to complete projects and resupply of B Company at Moc Hoa became the major logistic concerns during this period. Completion of the water and power plants ~~were delayed due to the lack of replacement items for~~

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components of the 9,000 gallon per hour emulators and the 500 KVA generators. The time required for the construction of the power distribution system was extended when copper wire became unavailable and aluminum cable was substituted: due to the longer installation time, the need for special fittings for use with aluminum and additional time required to obtain these fittings, and the additional on the job training of the power linemen, who were unfamiliar with the special procedures, materials, and techniques required with aluminum. Selected plumbing and electrical items delayed completion of one hangar, dispensaries, the dental clinic, and maintenance buildings. Beneficial occupancy was frequently possible however in spite of material shortages.

Principal supply of Moc Hoa was accomplished by four water convoys of escorted LCU and LCM loaded at Dong Tam and Vung Tau and moving up the Song Vam Co Tay. Each convoy arrived at Moc Hoa without incident. POL repair parts, minor supplies, and personnel were air transported to Moc Hoa from Dong Tam, Can Tho, and Ton Son Nhut. The S-4 used all sources for requisitioning flights, which were provided by 20th Engineer Brigade and 34th Engineer Group: Transportation Movements Agency; 9th Infantry Division; Senior Advisory IV Corps; 214th Aviation Battalion; and 53rd General Support Group. Major items which required air lift included sheersfoot rollers, a 600 gallon trailer mounted asphalt distributor, dozer tracks, reinforcing steel, and POL pipeline. Airlift of these items was necessary due to change in project scope, change in schedule, and/or non-availability at time of water shipment.

Battalion operations were not disrupted by enemy activities during the period. The Battalion expended 44,546 manhours on security. The principal enemy activities affecting the 93d were mortar attacks at Dong Tam and Moc Hoa. The Battalion had no casualties due to enemy action and only negligible damage to equipment, material, or construction at either Dong Tam or Moc Hoa.

Battalion headquarters remained at Dong Tam, with few personnel changes during the period. Principal changes were: 1LT Paul D. Gordon, CE, 05243892 to Bn S-4; vice CPT William A. Miller, CE, OF 102562; 1LT Rodney L. Wells, CE, 05257854 to EFMO, vice CPT Francis M. Maresco, CE, OF 100965 who remained CO, A Co: assignment of CPT Robert C. Blackmon III, MC, 05254909 to Bn Surgeon, which was unfilled; and 1LT Robert L. Seelay, CE, 05243948 to CO, D Co, vice 1LT Eugene H. Heinle, CE, 05243559. Basic personnel and administrative statistics are given at inclosure 5.

Administration of the battalion was made more complex by the separate location of B Company. 34th Engineer Group and 20th Engineer Brigade courier flights provided for regular mail and distribution to and from Moc Hoa and permitted command and staff visits to the company. The courier flight was on an almost daily schedule, however the very limited organic air support available to the 34th Engineer

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Group was inadequate to support Group Command control and five battalions, of which four had multiple locations in the Delta which were accessible only by air. The Group had one UH-6 and one LOH-6 aircraft and frequent use of one UH-1 assigned to the 20th Brigade. Transport Movements Agency provided occasional C-7 and CH-47 flights for resupply and for movement of groups of personnel. Medical support for B Company was provided by two resident aid men of the Battalion Medical Section, weekly visits by the Battalion Surgeon, and by US Military and Civilian doctors at the Vietnamese Kien Tuong Provincial Hospital adjacent to the B Company compound at Moc Hoa.

The Battalion continued to be responsible for one of the six sectors of the Dong Tam Base perimeter and manned the seven bunkers comprising that sector. The Battalion was subordinate in this role to the 9th Division Support Command Commander who had the tactical responsibility for defense of Dong Tam and operations in the immediate vicinity of the base. At Moc Hoa, area defense was under the control of the Commander of B/1st Special Forces Detachment. B Company's compound was within the Moc Hoa perimeter, which was manned by regional and popular forces and "M" Force Special Forces. B Company was responsible for the security of its own compound, and for coordination with the Commander of B/1st. Regional forces provided job site security at night for B Company's two shift operation. Other security requirements were recognized in arming and convoying all vehicles going off Dong Tam.

Principal decisions required in connection with operations during the period concerned the task organization for the Moc Hoa project, nature of reinforcement for the Moc Hoa effort, choice between different construction techniques in major revetment and hard-stand construction, and manner of accommodating the "civilianization" of the Battalion.

B Company was sent to Moc Hoa to upgrade an existing runway to C-130 type I; build helicopter revetments and refuel and repair facilities along the runway; and prefabricate latrines and showers for personnel of a tactical task force to be moved into the area. This scope was greatly expanded by a near doubling of the number of helicopters to be provided revetments; extending the runway to C-130 type II and providing turnarounds and a parking apron; moving the location of the helicopter facilities to a separate area and constructing them incorporated with a battalion-plus cantonment area; and adding fixed wing aircraft revetments and a POL pipeline. The equipment sent to Moc Hoa originally were scrapers, dozers, bucket loaders, graders, and cranes. The relocated helicopter facilities were sited on the highest ground available, but most of it was still under inches of water. Although dozers could work the material the scrapers could not operate. An augmentation of dump trucks and additional dozers was sent. As the land dried it became possible to use the scrapers and a major design increase

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was made in the quantity of earth to be moved, with directions received to include a berm and to bring all facilities above rainy season high water levels. In response, a final major equipment lift of additional scrapers was sent, to bring the construction equipment level to seven scrapers; five dozers; three graders; eight dump trucks; a clamshell; two bucket loaders; a 12-wheel and four sheepsfoot rollers; two water distributors; and two asphalt distributors. Concurrently total battalion equipment strength was dropping due to scoring out of equipment requiring 4th or higher echelon maintenance. This reduced battalion earthmoving capability to approximately one half of authorized equipment levels. The high proportion of vertical construction in most of projects on Dong Tam permitted the concentration of most of the Battalion's heavy construction capability at Moc Hoa. Shortage of equipment at Dong Tam also permitted a later reinforcement of B Company with personnel to operate full second shift of all earthmoving equipment at Moc Hoa.

Selection of construction material and design had a major influence on meeting schedules, and the number of man days required, and the quality of the finished effort in construction of 22 helicopter revetments and 7 CH-47 landing and staging pads at Dong Tam. The choice in construction of revetments between prefabricated corrugated steel and lumber frame, and concrete poured with reusable wood forms was decided by the availability of Vietnamese for prefabricating the corrugated steel and lumber type, and an uncertainty in economics of manpower and material in the use of concrete. A short deadline did not permit sufficient experimentation to justify selection of the apparently as economical and more durable concrete revetments. The pads within the revetments however were made of concrete, which was poured between forms and bull-floated for minimum man effort in placing. The alternative pad design of T-17 membrane overlain with M8A1 matting had been almost universally used, but had a funded cost about ten times greater and a manpower requirement than the concrete design. The CH-47 staging and landing pads were to be built on earth mounded three feet above paddy level and consisting of red clay overlain with hydraulic fill sand. Choices of construction were sand-cement stabilization and concrete. The sand-cement would involve tight work for heavy equipment on the 100' x 125' elevated mounds with uncertain results due to the anticipated mixing with clay. Concrete required no more cement but would use additional man effort to screed and finish the pads. The availability of concrete batch plant capacity permitted the more positive and permanent construction with concrete.

"Civilianization" of the battalion was directed by US Army Vietnam in October 1968. The action consisted of deleting 204 enlisted spaces from the MTOE and substituting a manning level of 228 Vietnamese civilian permanent hire personnel. Total numbers by grade and MOS were designated for the enlisted personnel spaces

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lost. The battalion was required to designate the spaces to be lost by company, paragraph, and line. 34th Engineer Group (Construction) directed specific related actions in conjunction with the civilianization program. These included reducing the 113th Engineer Detachment (Concrete Mixing and Paving) to zero strength, and providing 39 spaces designated by MOS and grade, which had been made available by reorganization of the 62nd Engineer Battalion (Construction). The spaces lost, spaces gained from the 62nd, and the civilian authorization are shown in inclosure . The indicated reorganization would be to staff each company with Vietnamese to replace the skills and personnel lost and operate with three identical line companies. This ideal organization was not practicable due to inability to recruit Vietnamese with the necessary skills; short work days of the Vietnamese at Dong Tam; due to individual in-processing in the morning and the need to convoy the workers to My Tho while the roads were open; and lack of mobility of permanent hire personnel combined with a forecasted increased commitment of work remote from Dong Tam. The "civilization" program would essentially result in a reduced strength organization, augmented with Vietnamese carpenters, laborers, or on-the-job trainees. Principal options considered for accommodating the necessary changes were elimination of 2 construction platoons and a company headquarters, uniform paring of the companies, and unequal cutting of spaces and organization by Vietnamese to provide both an essentially unaffected US company and companies with different amounts of US spaces and Vietnamese augmentation. The latter option was selected, on the basis of the following principal considerations: projected project mix included major remote efforts, minor remote efforts, and major effort at Dong Tam and in the adjacent area of Dinh Tuong Province; personnel spaces lost did not reduce the manning of the command and control structures; project mix and location indicated probable wide fragmentation of battalion effort over many widely separated concurrent construction sites; and probability that there would be no significant improvement in ability to hire Vietnamese with the required skills.

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2. Section 2. Lessons Learned: Commander's Observations, Evaluations, and Recommendations

a. Personnel: None

b. Operations.

(1) Expedient Penoprime Devices

(a) OBSERVATION. An expedient means of applying penoprime has become an evident necessity, due to a shortage of sufficient manufactured distributors in Vietnam.

(b) EVALUATION. The construction of an easy to operate distributor with no mechanical parts was required. Fabrication of the spray bar was considered first. Full distribution was required, even when a low available head occurred as the tank emptied. Since this was to be an expedient device there would be no pump or agitator to circulate or stir the asphalt. The speed of operation and, the tendency for the spray bar to clog with asphalt was also considered. A slotted spray bar (See Incl 6) was found to provide much better flow distribution than spaced holes and did not require height adjustment necessary with the holes. The slot was 1/8 inches wide, and cut by a pneumatic jig saw. The pipe was 2" diameter galvanized steel water pipe. The high rate of flow through the slotted spray bar prevented clogging of the slot and could be compensated for by moving the truck faster than with spray from holes. Guy wires were attached from the ends of the bar to the bed of the tank carrier. This kept the bar horizontal to the ground (Incl 7). Since vibration caused the treaded joints to unscrew they should be tack welded. An optimum penoprime/diesel mixture was determined by tests on the hydraulically dredged silty sand (Fineness Modulus approximately 1.0) at Dong Tam Baso. The mixture that had the best soil binding and dust suppression characteristics was a combination of 75% penoprime and 25% diesel.

(c) RECOMMENDATION. A suitable expedient penoprime distributor can be fabricated from pipe using a continuous slot for spraying.

(2) Power Pole Anchor Barrels

(a) OBSERVATION. Fifty-five gallon barrels are cut in half, filled with concrete and are used as anchors for power poles. The barrels are being cut by the use of detonating cord, however the two resulting halves are often useless due to severe crimping of the edges.

(b) EVALUATION. It was found that by filling the barrels with water and using six wraps of detonating cord the resulting halves have only rolled edges. (See Incl 8). The resulting half-barrel is left in sufficiently good condition that it can also serve as the barrel for burn out latrines.

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Ending 31 January 1969; RCS CS FOR - 65 (RI)

(c.) RECOMMENDATION: Barrel may be prepared rapidly and cleanly by filling the barrel with water and cutting it with six wraps of detonating cord.

3. Repairing Pipe Leaks.

(a.) OBSERVATION: Pipe repair has become a major problem with the installation of a central water system. Most leaks require continuous welding around the pipe coupling in the re-opened trench. The small amount of water left in the pipe after the water is shut off and the tight working room under the pipe make it difficult to complete the weld at the pipe invert.

(b.) EVALUATION: A means of stopping the water completely or completely draining that section of pipe is required. This would permit a good weld to be made in the absence of water.

(c.) RECOMMENDATION: A good weld was made rapidly by cutting out and removing a section from the top of the pipe and sealing the drained but not dry pipe with dirt. The dirt diked off the water and absorbed the excess. The invert of the pipe was then welded from the inside. The mud is removed and the cut-out section is welded back in place.

(4.) Concrete VS M8A1 Airfield Matting for Pads in Helicopter Revetments.

(a.) OBSERVATION: The standard T-17 and M8A1 pad for helicopters within revetments is time consuming, expensive, and require significant maintenance.

(b.) EVALUATION: M8A1 matting is useful because of its speed of installation for airstrips and large aircraft parking areas. However soil beneath the matting must be kept dry by using T-17 membrane. The alternative of concrete pad construction was tried with success. Concrete was found to be faster to install and did not require as extensive sub-base preparation. A cost comparison showed the following funded costs per UH1 helicopter pad.

	<u>Pad Costs</u>
T-17/M8A1.....	\$1,725.00
Concrete(only cement costed as funded cost).	\$ 170.80

Production and transport costs of aggregate at Dong Tan reduced the ratio from approximately 10:1 to approximately 4:1. It should be emphasized that this is based on funded costs. Besides lower initial costs the concrete requires no maintenance.

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An example of this concept is the protective revetments for helicopters at Dong Tam, constructed by Company C, 93d Engineer Battalion (Const). This type of construction was preferred by the using agencies.

(c.) RECOMMENDATION: That concrete helicopter revetment pads be adopted as a standard design for use in Vietnam where aggregate is available.

(5.) Capping of Earth Filled Revetments.

(a.) OBSERVATION: An effective method of capping earth filled revetments was required.

(b.) EVALUATION: The former capping procedure was to use sheet metal or plywood to form the cap. Sheet metal is difficult to hold fast with nails and is susceptible to being torn off under severe rotor wash of helicopters. Additionally it does not provide a completely watertight seal without welding. The plywood is difficult to seal to the metal sides, weathers rapidly and is also vulnerable to rotor wash. A 4" concrete cap was used with excellent success. The revetment is earth filled to within 3" to 4" of the top. A limited amount of water is then added to compact the earth fill. Hydraulic pressure within the revetment must be avoided. Two or three water applications should be used dependant on the type of soil used for fill. A concrete cap approximately 4" in depth can then be placed. The concrete should be sloped at least 1/8": 1' to allow for drainage. The maintenance needs of the concrete caps has been negligible.

(c.) RECOMMENDATION: That concrete caps for helicopter pads be adopted as a standard design.

(6.) Preparation of Surfaces to be Penetrated.

(a.) OBSERVATION: The problem encountered is how to prepare loose sandy soil for penetrating.

(b.) EVALUATION: Difficulties have occurred in the application of penetrant on silty sand hydraulic fill areas of Vietnam. If proper compaction is not achieved prior to application rains and rotor wash will break up the penetrated surface. It then loses its effectiveness as a water repellent and a dust palliative.

When a surface is to carry no appreciable load, extensive compaction or compaction at optimum moisture content with a 13 wheel roller prior to penetrating the surface will be sufficient. Repeated water treatment followed by rolling provides a tight compact surface. The penetrant is applied while the surface is still damp to maintain the tight surface layer.

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Ending 31 January 1969; RGS CS FOR - 65 (RI)

(c.) RECOMMENDATION: That sandy soil in heliport areas receive the noted treatment prior to penepime application.

c. TRAINING: None

d. INTELLIGENCE: None

e. LOGISTICS

(1.) Cement Handling and Storage.

(a.) OBSERVATION: An unusually large amount of waste has occurred during the handling and storage of cement.

(b.) EVALUATION: Cement bags palletized and held together with only four bands cannot withstand repeated handling and storage. This unit has experienced up to 50% loss due to broken and dilapidated pallets. (See Incl.9) Cement stored for even short periods of time must be protected from rain and moisture. Bulk issue would greatly reduce loss due to handling and would be ideal for units that handle large amounts of cement. If a large stockpile is to be maintained, silo type storage would be advantageous.

(c.) RECOMMENDATION: That bulk shipments of cement be introduced into Vietnam particularly for those units operating central batch plants or conducting sand-cement stabilization.

f. ORGANIZATION: None

g. OTHER: None

RAJPH H. LEWERS JR.
LTC, CE
Commanding

9 Incl

as

Incl 1 - 9 wd Hq DA

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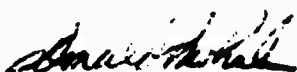
SUBJECT: Operational Report of 93d Engineer Battalion (Const)
for Period Ending 31 January 1969, RCS CSFOR-65(R1)

DA, HEADQUARTERS, 34th Engineer Group (Const), APO 96320

TO: Assistant Chief of Staff for Force Development, Department
of the Army, Washington D.C., 20310
Commanding Officer, 20th Engineer Brigade, ATTN: AVBI-OS,
APO 96491

1. The subject report submitted by the 93d Engr Bn has been reviewed by this HQ and is considered comprehensive and of value for documentation and review of the reporting units activities and experiences.
2. This HQ concurs with the submitted report with the following comments:
 - a. Ref para 2b(1), page 8: Expedient distributor is acceptable but recommend procurement of proper distribution equipment if at all possible.
 - b. Ref para 2b(2), page 8: Idea is sound but other units have gotten clean cuts without water. Believe that crimping may be caused by using too many wraps, six, of detonating cord. Three to four wraps of cord should be sufficient.

FOR THE COMMANDER:



DONALD L WHEELER
Major, AGC
Adjutant

Copy Furnished:
CO, 93d Engr Bn

AVBI-OS (13 Feb 69) 2nd Ind

SUBJECT: Operational Report - Lessons Learned, RCS CSFOR-65 (R1)
for Quarterly Period Ending 31 January 1969

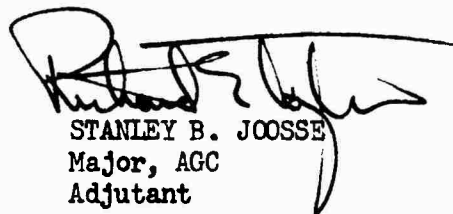
DA, HEADQUARTERS, 20TH ENGINEER BRIGADE, APO 96491

8 MAR 1969

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-DST,
APO 96375

1. Submitted in accordance with USARV Regulation 525-15, dated 13 April 1968.
2. Subject report for the 93rd Engineer Battalion (Construction) has been reviewed and is considered adequate.

FOR THE COMMANDER:


STANLEY B. JOOSSE
Major, AGC
Adjutant

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CO, 93rd Engr Bn w/o incl

AVHGC-DST (13 Feb 69) 3d Ind
SUBJECT: Operational Report of 93d Engineer Battalion (Const) for
Period Ending 31 January 1969, RCS CS FOR - 65 (R1)

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375 25 MAR 1969

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,
APO 96558

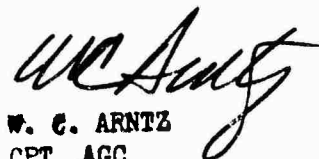
1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 January 1969 from Headquarters, 93d Engineer Battalion (Construction).

2. Comments follow:

a. Reference item concerning "Civilianization" of the battalion, page 6 (bottom), paragraph 1; nonconcur. The drawbacks associated with civilianization were envisioned at the time the program was approved. Short range force structure adjustments programmed by USARV will reduce the impact of civilianization on engineer construction battalions. Action by higher headquarters is not indicated.

b. Reference item concerning Cement Handling and Storage, page 11, paragraph 2e(1); concur. The introduction of bulk cement to Vietnam would materially reduce the waste incurred during handling and storage. However, until silo type storage and bulk transportation facilities are made available it is impossible to use bulk cement. The establishment of bulk type facilities is being studied by the USARV Engineer.

FOR THE COMMANDER:



W. C. ARNTZ
CPT, AGC
Assistant Adjutant General

Cy furn:
93d Engr Bn
20th Engr Bde

GPOP-DT (13 Feb 69) 4th Ind

SUBJECT: Operational Report of HQ, 93d Engr Bn (Const) for Period
Ending 31 January 1969, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 1 APR 1969

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

G. E. Holeyfield
G. E. HOLEYFIELD
GC

UNCLASSIFIED

Security Classification

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(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

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